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FIELD MAINTENANCE PRINT SET

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D-UA-M727Ø-Ø-Ø	LSI-11 CPU
D-CS-M727Ø-Ø-1	LSI-11 CPU

UNIT VARIATIONS COVERED BY THIS PRINT SET
KD11-HA

KD11-HA
Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO. MPØØ495

REVISIONS	REV	CHG. NO.	DATE

USED ON OPTION/MODEL
KD11-HA

SHEET 1 OF 1

DRN. E Wilson	DATE 22 Sept 77	
CHK'D RW Saunter	DATE 23 Sept 77	
PROJ. ENG. Robert Fitch	DATE 1 Dec 77	
FIELD SERV D Meaker	DATE 2-DEC 77	

digital

TITLE: LSI 11 CPU WITH NO MEMORY

SIZE	CODE	NUMBER	REV.
B	TC	KD11-HA-1	

DIST.

DRB 124

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY E. Wilson DATE 22 SEPT 77	CHECKED R W Cantler DATE 23 Sept 77	SECTION 1
ENG Robert Fitz DATE 1 Dec 77	PROD DATE 12-2-77	ISSUED SECT. 1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION
1	M727Ø	LSI 11 CPU	1
2	99Ø5622-Ø	BOX, FOLDING, REVERSE TUCK	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
LSI 11 CPU WITH NO MEMORY	B-DD-KD11-HA	A	PL	KD11-HA-Ø		
	SHEET 1 OF 1	DIST				

DEC FORM
DRA 110

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+12V — D13 D664, D14 D664 — C23 .47μf — C39 .47μf

K5 -VBB
K5 RPH 3 H
K5 RPH 1 H
+12V

C1 .47 μf

1611 DATA CHIP 2111549-01 E30

K1 WDAL ØØ H	3	38	K1 WMIB ØØ L
K1 WDAL Ø1 H	4	37	K1 WMIB Ø1 L
K1 WDAL Ø2 H	5	36	K1 WMIB Ø2 L
K1 WDAL Ø3 H	6	35	K1 WMIB Ø3 L
K1 WDAL Ø4 H	7	34	K1 WMIB Ø4 L
K1 WDAL Ø5 H	8	33	K1 WMIB Ø5 L
K1 WDAL Ø6 H	9	32	K1 WMIB Ø6 L
K1 WDAL Ø7 H	10	31	K1 WMIB Ø7 L
K1 WDAL Ø8 H	11	30	K1 WMIB Ø8 L
K1 WDAL Ø9 H	12	29	K1 WMIB Ø9 L
K1 WDAL 1Ø H	13	28	K1 WMIB 1Ø L
K1 WDAL 11 H	14	27	K1 WMIB 11 L
K1 WDAL 12 H	15	26	K1 WMIB 12 L
K1 WDAL 13 H	16	25	K1 WMIB 13 L
K1 WDAL 14 H	17	24	K1 WMIB 14 L
K1 WDAL 15 H	18	23	K1 WMIB 15 L

VBB Ø3 Ø1 VDD — VSS Ø4 Ø2 WAIT — pins 2 1 40 39 / 19 20 21 22

+5V — R1 2K — C2 .47μf

1631-15 (3Ø15) EIS/FIS E34 2300385 OPTIONAL

K1 MSTB L — 4
K1 MCOMP H — 5

K1 WMIB 15 L	7	38 K1 WMIB ØØ L
K1 WMIB 14 L	8	37 K1 WMIB Ø1 L
K1 WMIB 13 L	9	36
K1 WMIB 12 L	10	35 K1 WMIB Ø2 L
K1 WMIB 16 L	11	34 K1 WMIB Ø3 L
K1 WMIB 17 L	12	33 K1 WMIB Ø4 L
K1 WMIB 18 L	13	32 K1 WMIB Ø5 L
K1 WMIB 19 L	14	31 K1 WMIB Ø6 L
K1 WMIB 2Ø L	15	30 K1 WMIB Ø7 L
K1 WMIB 21 L	16	29 K1 WMIB Ø8 L
	17	28 K1 WMIB Ø9 L
	18	27 K1 WMIB 1Ø L
		26 K1 WMIB 11 L
		25 K5 PH 2 H
		24 K5 PH 4 H
		23 K1 MROM DISABLE L

VBB Ø3 Ø1 VDD — VSS Ø4 Ø2 VCC — pins 2 1 40 39 / 19 20 21 22

+5V — R8 2K

+5V
K5 RPH 2 H
K5 RPH 4 H

C5 33 pf — K1 WMIB ØØ L
C6 33 pf — K1 WMIB Ø1 L
C9 33 pf — K1 WMIB Ø2 L
C7 33 pf — K1 WMIB Ø3 L
C8 33 pf — K1 WMIB Ø4 L
C12 33 pf — K1 WMIB Ø5 L
C21 33 pf — K1 WMIB Ø6 L
C14 33 pf — K1 WMIB Ø7 L
C16 33 pf — K1 WMIB Ø8 L

C18 33 pf — K1 WMIB Ø9 L
C20 33 pf — K1 WMIB 1Ø L
C22 33 pf — K1 WMIB 11 L
C17 33 pf — K1 WMIB 12 L
C11 33 pf — K1 WMIB 13 L
C13 33 pf — K1 WMIB 14 L
C10 33 pf — K1 WMIB 15 L
C15 33 pf — K1 WMIB 16 L
C19 33 pf — K1 WMIB 17 L

K1 WAIT H

D1 D664, D15 D664 — +12V — C35 .47μf — C36 .47μf — C37 .47μf

K5 -VBB
K5 RPH 3 H
K5 RPH 1 H
+12V

C3 .47 μf

1621-7 (2Ø07) CONTROL CHIP 23Ø2C4 E33

K3 WIOI RQ (1) H	3	I3	
K3 WEVI RQ (1) H	4	I2	
K3 WIPI RQ (1) H	5	I1	
	6	IØ	
K1 WMIB 17 L	7	35	K1 WMIB Ø2 L
K2 WBUSY H	8	34	K1 WMIB Ø4 L
K1 MCOMP H	9	33	K1 WMIB Ø5 L
K3 WRESET (1) L	10	32	K1 WMIB Ø6 L
K1 WMIB 16 L	11	31	K1 WMIB Ø7 L
K2 WREPLY H	12	30	K1 WMIB Ø8 L
	13	29	K1 WMIB Ø9 L
K1 WDOUT H	14	28	K1 WMIB 1Ø L
K1 WWB H	15	27	K1 WMIB 11 L
K1 WIAK H	16	26	K1 WMIB 12 L
K1 WSYNC H	17	25	K1 WMIB 13 L
K1 WDIN H	18	24	K1 WMIB 14 L
		23	K1 WMIB 15 L

VBB Ø3 Ø1 VDD — VSS Ø4 Ø2 VCC — pins 2 1 40 39 / 19 20 21 22

C9 .47 μf

1631-7 (3Ø07) MICROM Ø E31 2300285

K1 WMIB 15 L	7	38 K1 WMIB ØØ L
K1 WMIB 14 L	8	37 K1 WMIB Ø1 L
K1 WMIB 13 L	9	36
K1 WMIB 12 L	10	35 K1 WMIB Ø2 L
K1 WMIB 16 L	11	34 K1 WMIB Ø3 L
K1 WMIB 17 L	12	33 K1 WMIB Ø4 L
K1 WMIB 18 L	13	32 K1 WMIB Ø5 L
K1 WMIB 19 L	14	31 K1 WMIB Ø6 L
K1 WMIB 2Ø L	15	30 K1 WMIB Ø7 L
K1 WMIB 21 L	16	29 K1 WMIB Ø8 L
	17	28 K1 WMIB Ø9 L
	18	27 K1 WMIB 1Ø L
		26 K1 WMIB 11 L
		25
		24
		23 K1 MROM DISABLE L

VBB Ø3 Ø1 VDD — VSS Ø4 Ø2 VCC — pins 2 1 40 39 / 19 20 21 22

C33 .47 μf

1631-1Ø (3Ø1Ø) MICROM 1 E32 2300185

	3	38	K1 WMIB ØØ L
	4	37	K1 WMIB Ø1 L
	5	36	
	6	35	K1 WMIB Ø2 L
K1 WMIB 15 L	7	34	K1 WMIB Ø3 L
K1 WMIB 14 L	8	33	K1 WMIB Ø4 L
K1 WMIB 13 L	9	32	K1 WMIB Ø5 L
K1 WMIB 12 L	10	31	K1 WMIB Ø6 L
K1 WMIB 16 L	11	30	K1 WMIB Ø7 L
K1 WMIB 17 L	12	29	K1 WMIB Ø8 L
K1 WMIB 18 L	13	28	K1 WMIB Ø9 L
K1 WMIB 19 L	14	27	K1 WMIB 1Ø L
K1 WMIB 2Ø L	15	26	K1 WMIB 11 L
K1 WMIB 21 L	16	25	
	17	24	
	18	23	K1 MROM DISABLE L

VBB Ø3 Ø1 VDD — VSS Ø4 Ø2 VCC — pins 2 1 40 39 / 19 20 21 22

+5V
K5 RPH 2 H
K5 RPH 4 H

K1

REVISIONS			
DIN	CHANGE NO.	REV.	
	M7270-00001	D	
M. Simmons 11/30/77			
R. FITCH			
Rob Fitch 1 Dec 77			

DRN. C. Wilson	9/19/77	FIRST USED ON LSI-11
CHK'D R. Fitch	9/19/77	digital
ENG. [illegible]	[illegible]	TITLE
PROJ. ENG. [illegible]	[illegible]	LSI-11 CPU
PROD.	[illegible]	
NEXT HIGHER ASSY.		
[illegible]		SIZE D CODE CS NUMBER M7270-0-1 REV. D
SCALE NONE		
SHEET 1 OF 1		DIST.

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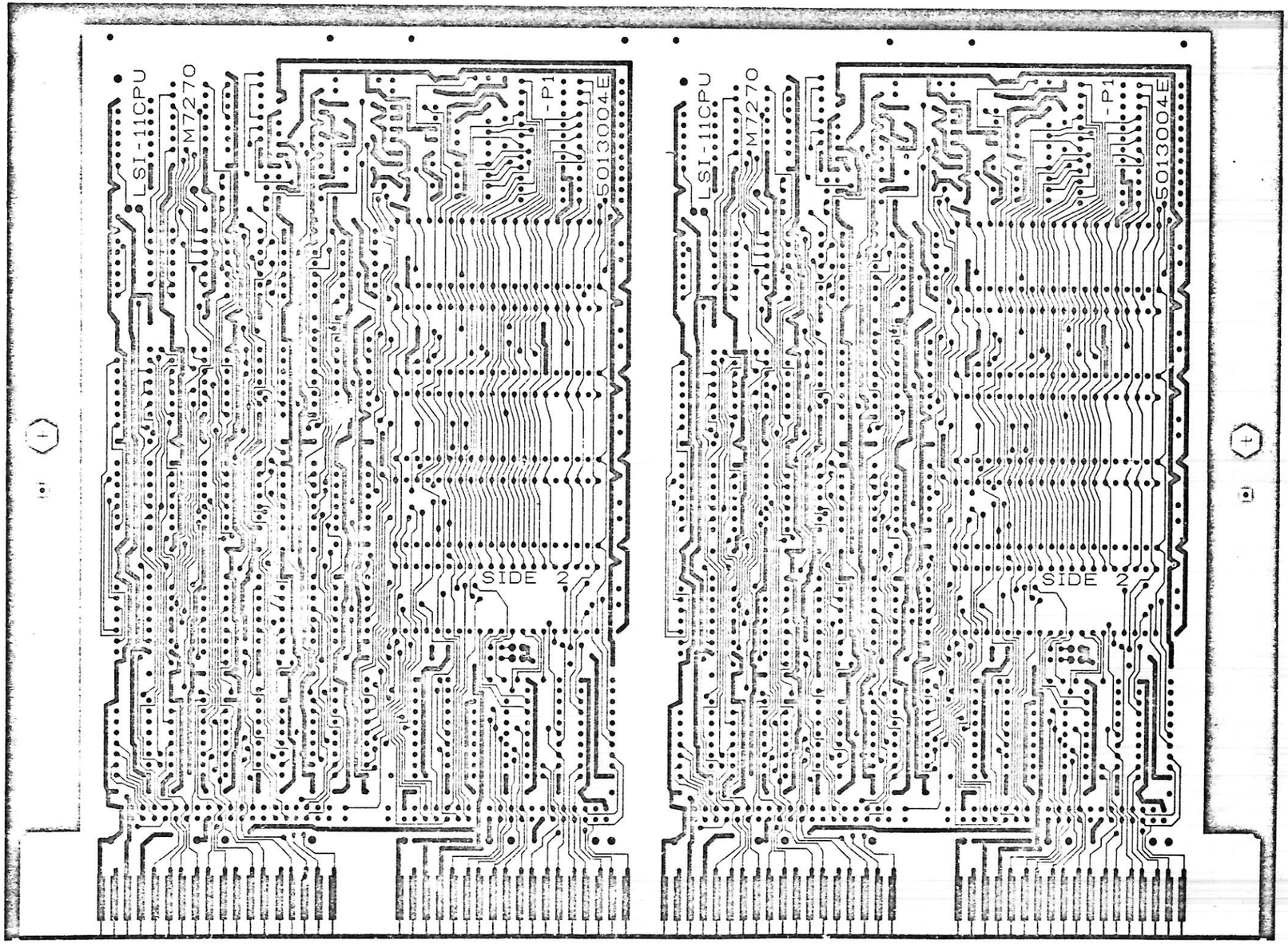
L2 L2



REVISIONS		
CHK	CHANGE NO	REV

SIZE	CODE	NUMBER	REV.
D	DUA	M7270-0-0	D

SHEET 1 OF 2

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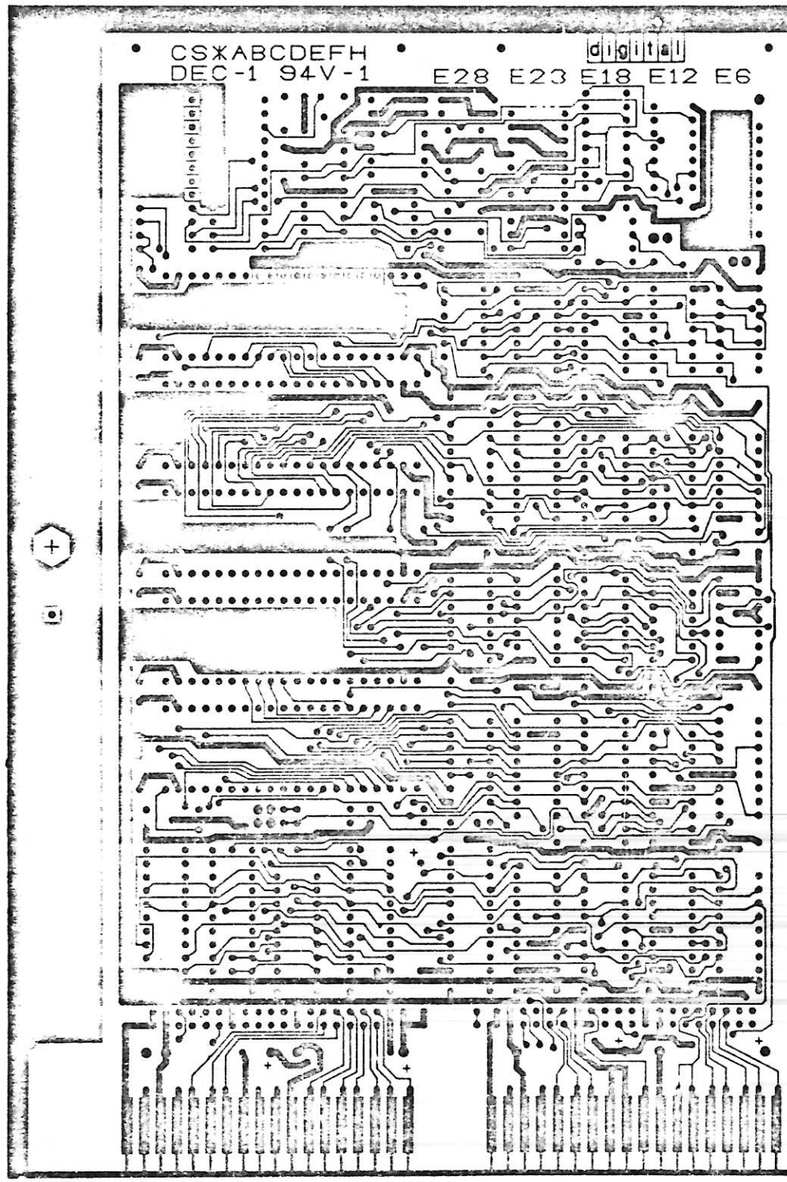
5013004E-P1 M7270

L1



5013004E-P1 M7270

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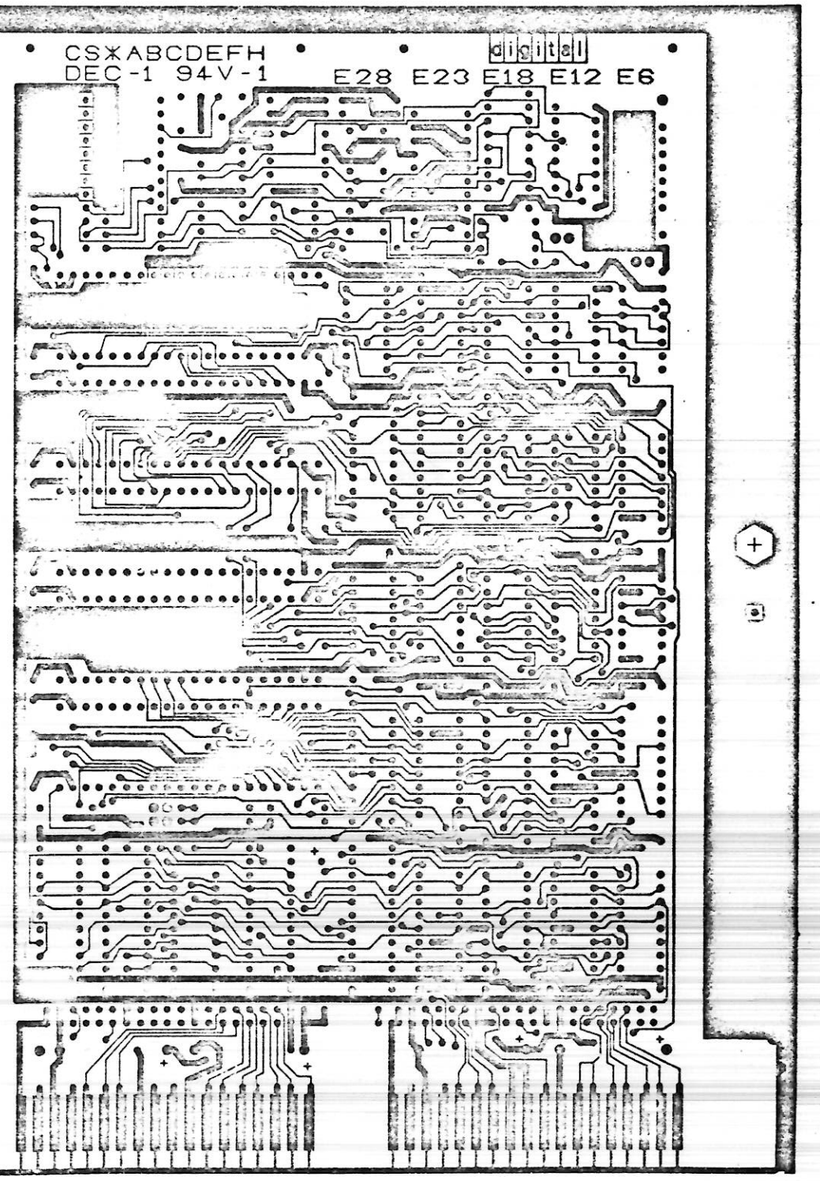

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
	D	UA	M7270-0-0	D

SCALE SHEET 2 OF 2

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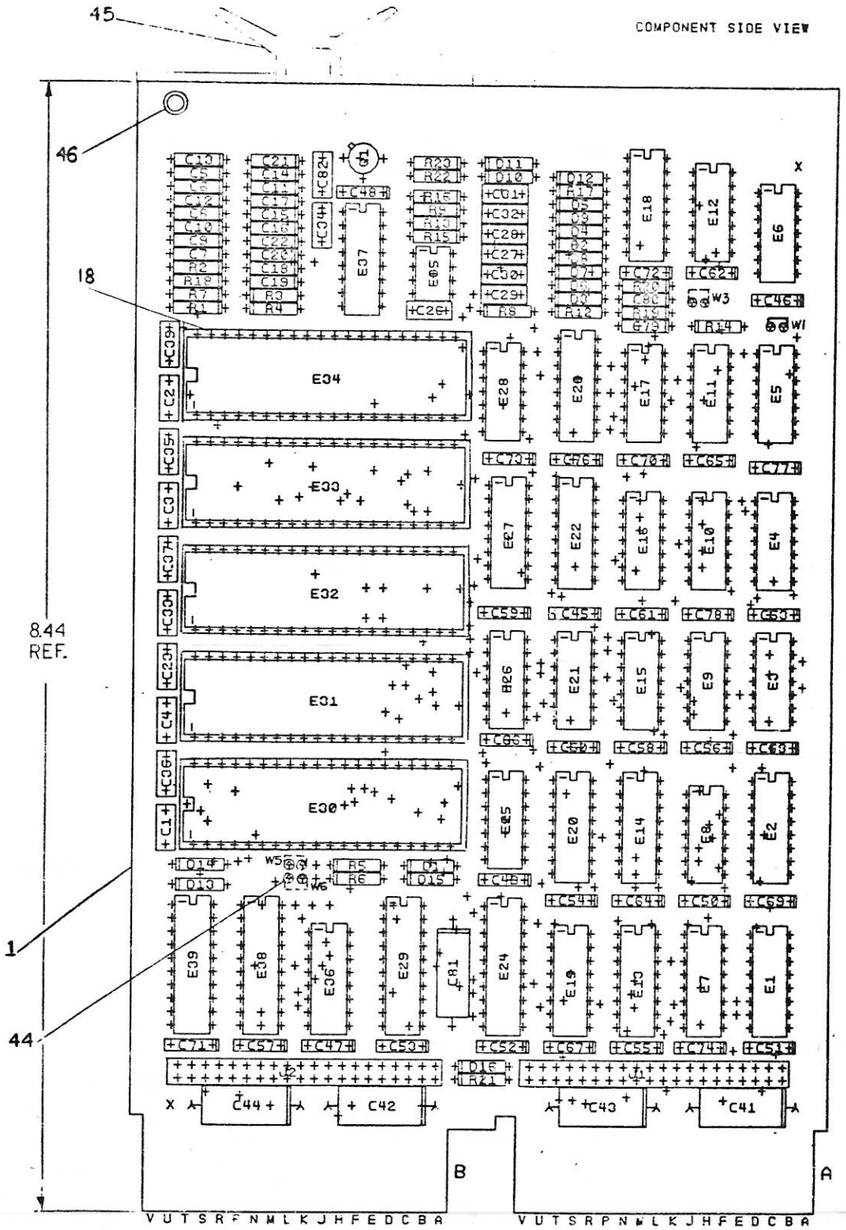
COMPONENT SIDE VIEW



NOTES: W1 INSTALLED, W2, W3, AND W4 NOT INSTALLED

CHK	CHANGE NO	REV

ETCH REV.
P.C. DESIGN DATA BASE REV.

SIGNATURES	DATE
DRN.	
CHK'D.	
ENG.	
PROJ.ENG.	
PROD.	

digital

TITLE

SCALE	SIZE	CODE	NUMBER	REV
SHT. OF	D			

NEXT HIGHER ASSY.

D A M7270-00

1 MS#

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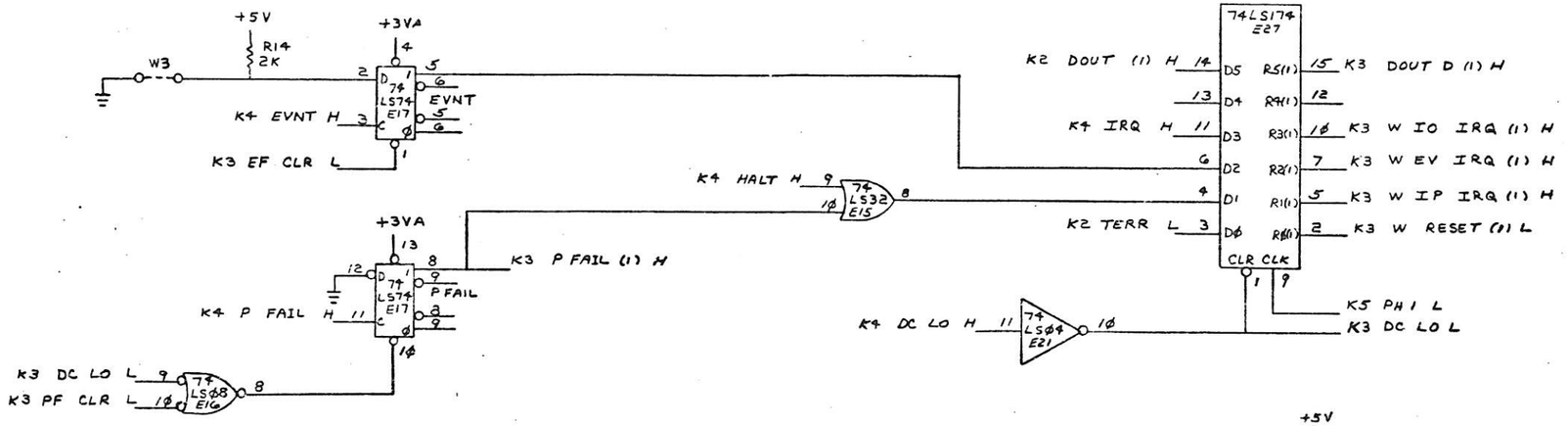

JUMPER TABLE

JUMPER	FUNCTION WHEN INSTALLED	FACTORY CONFIGURATION
W1	CRYSTAL CLOCK	I
W3	DISABLE EVENT LINE INTERRUPT	R
W5	POWER UP SELECT	R
W6	POWER UP SELECT	R

POWER-UP MODES

MODE	JUMPERS W6	JUMPERS W5	MODE SELECT
0	R	R	PC AT 24 AND PS AT 26, OR HALT MODE
1	R	I	ODT MICROCODE
2	I	R	PC AT 173000 FOR USER BOOTSTRAP
3	I	I	SPECIAL PROCESSOR MICROCODE (NOT IMPLEMENTED)

NOTE: R = JUMPER REMOVED, I = JUMPER INSTALLED

REVISIONS		
CHK	CHANGE NO.	REV.

K3

TITLE	SIZE	CODE	NUMBER	REV.
LSI-11 CPU	D	CS	M7270-0-1	D

SCALE — SHEET OF — DIST.

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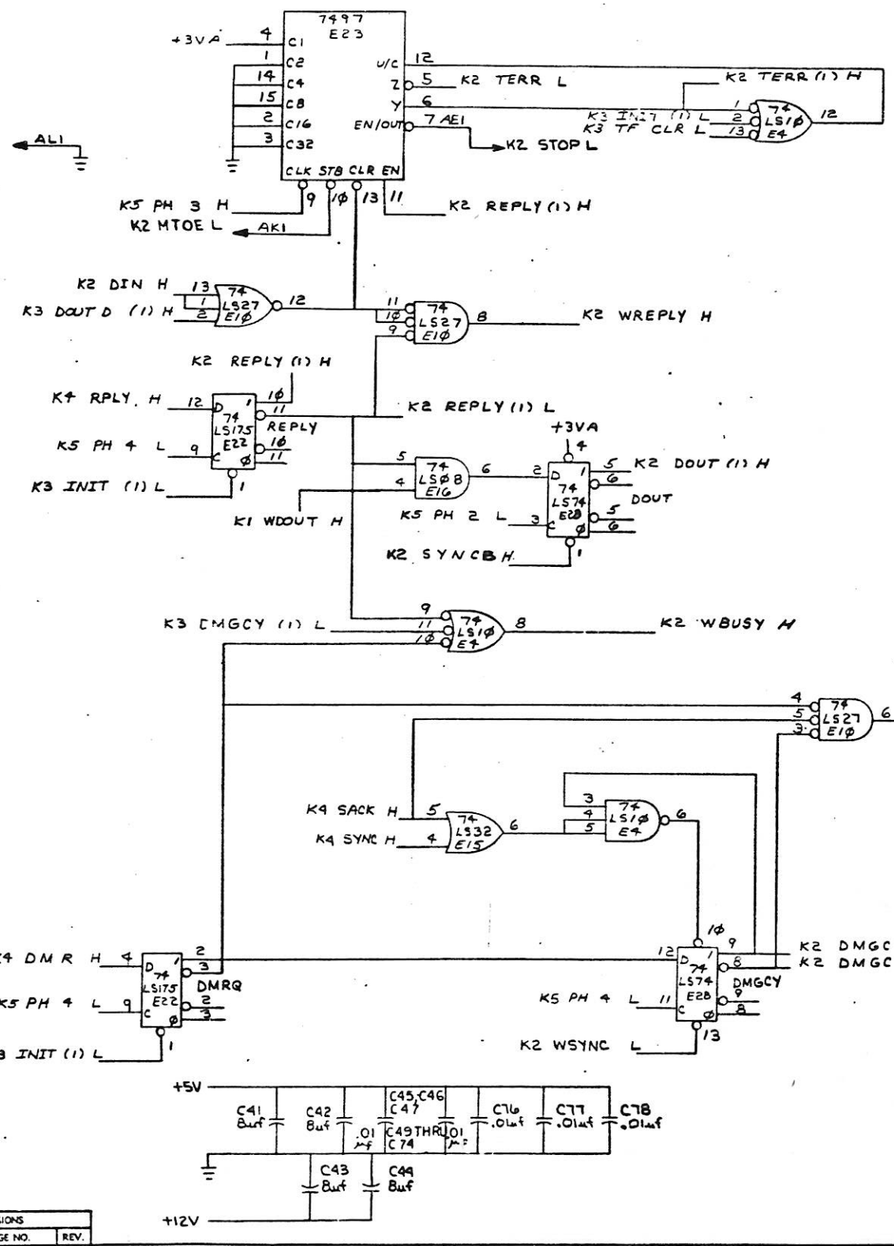

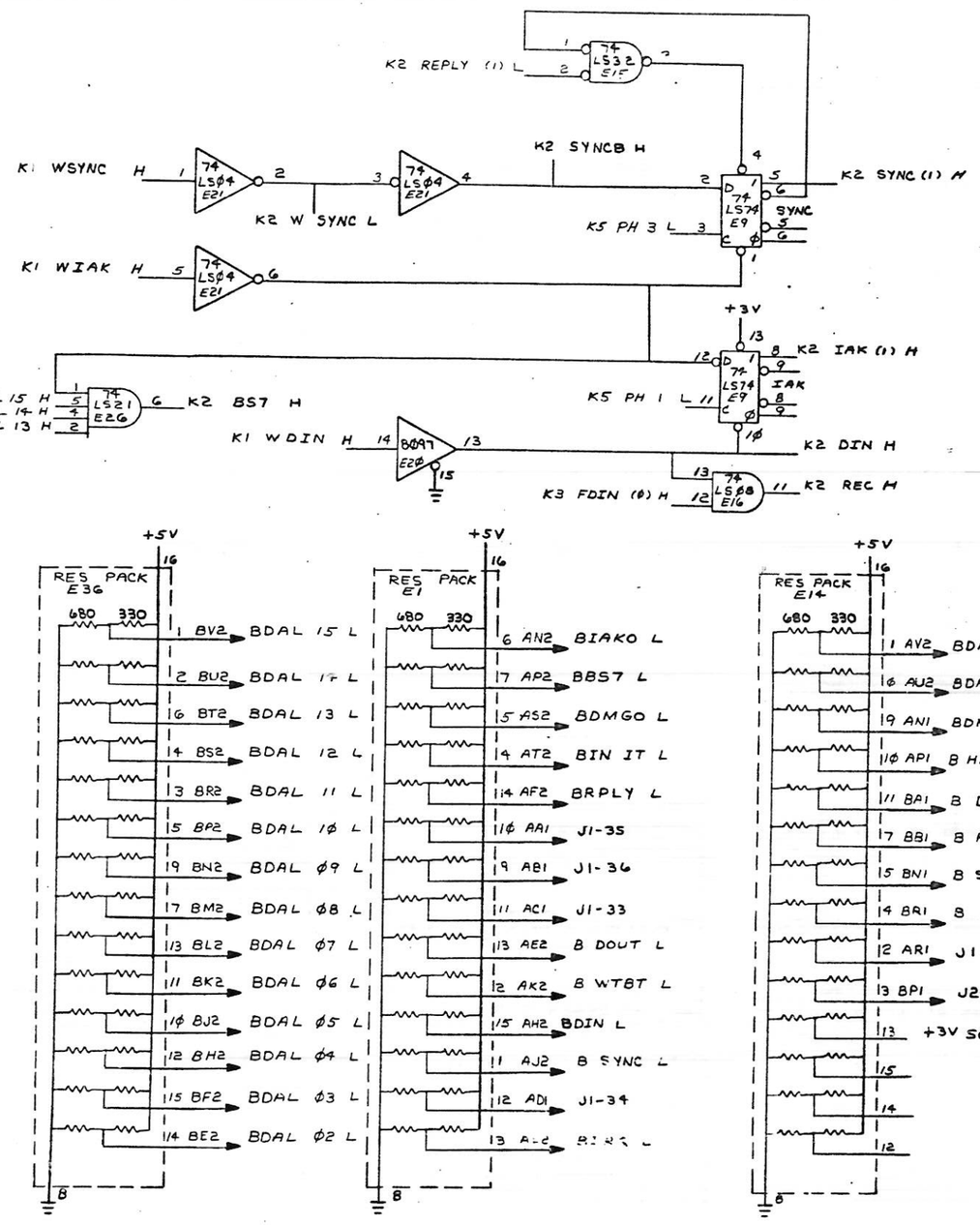

REVISIONS		
CHK	CHANGE NO.	REV.

K2

TITLE	SIZE	CODE	NUMBER	REV.
LSI-11 CPU	D	CS	M7270-0-1	D
SCALE	SHEET OF	DIST.		

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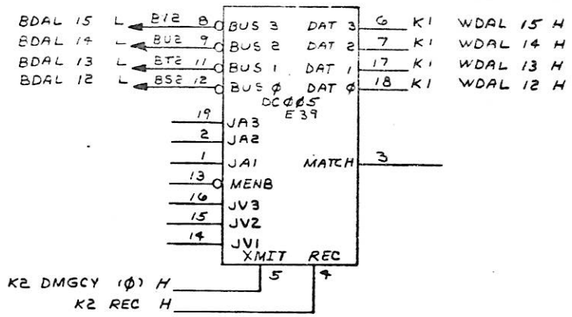

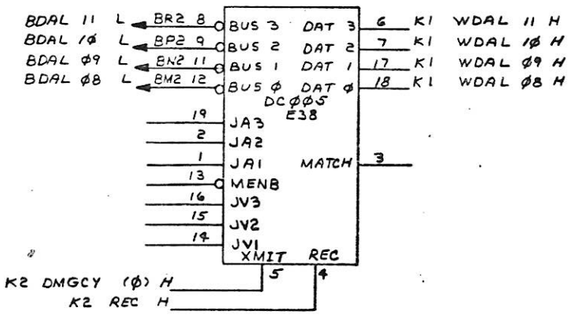

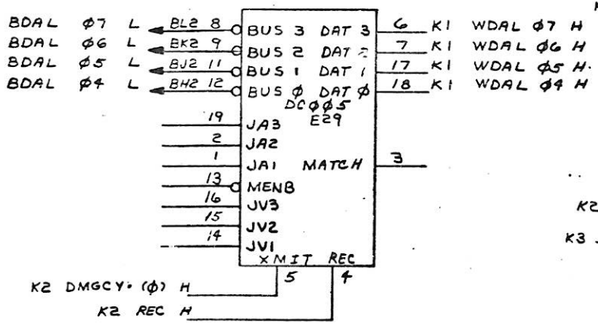

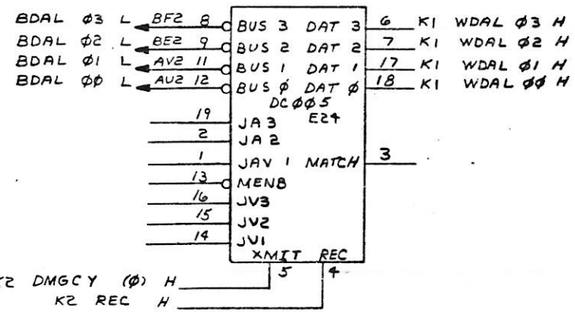

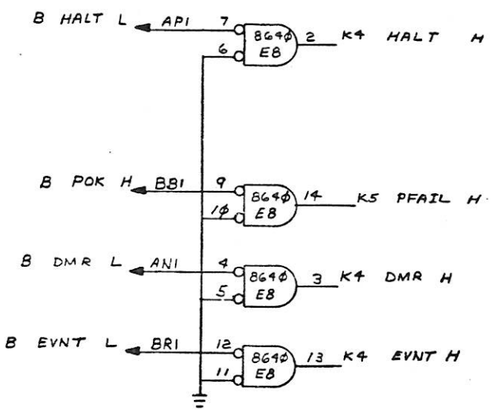

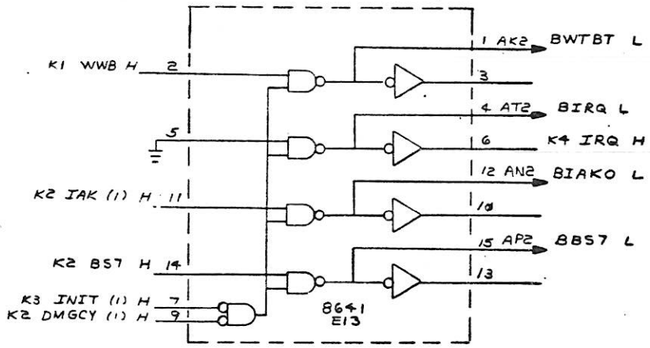

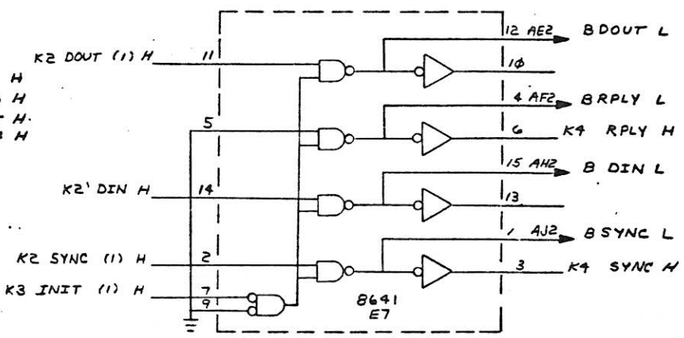

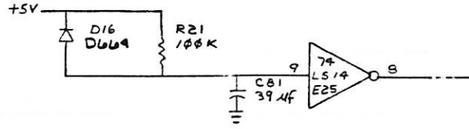

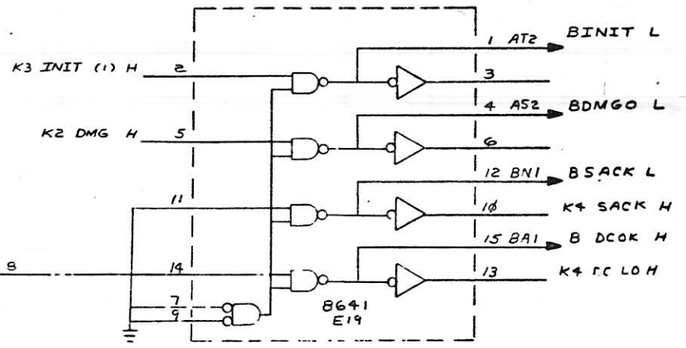

K4

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
LSI-11 CPU	D	CS	M727Ø-Ø-1	D
SCALE	SHEET OF	DIST.		

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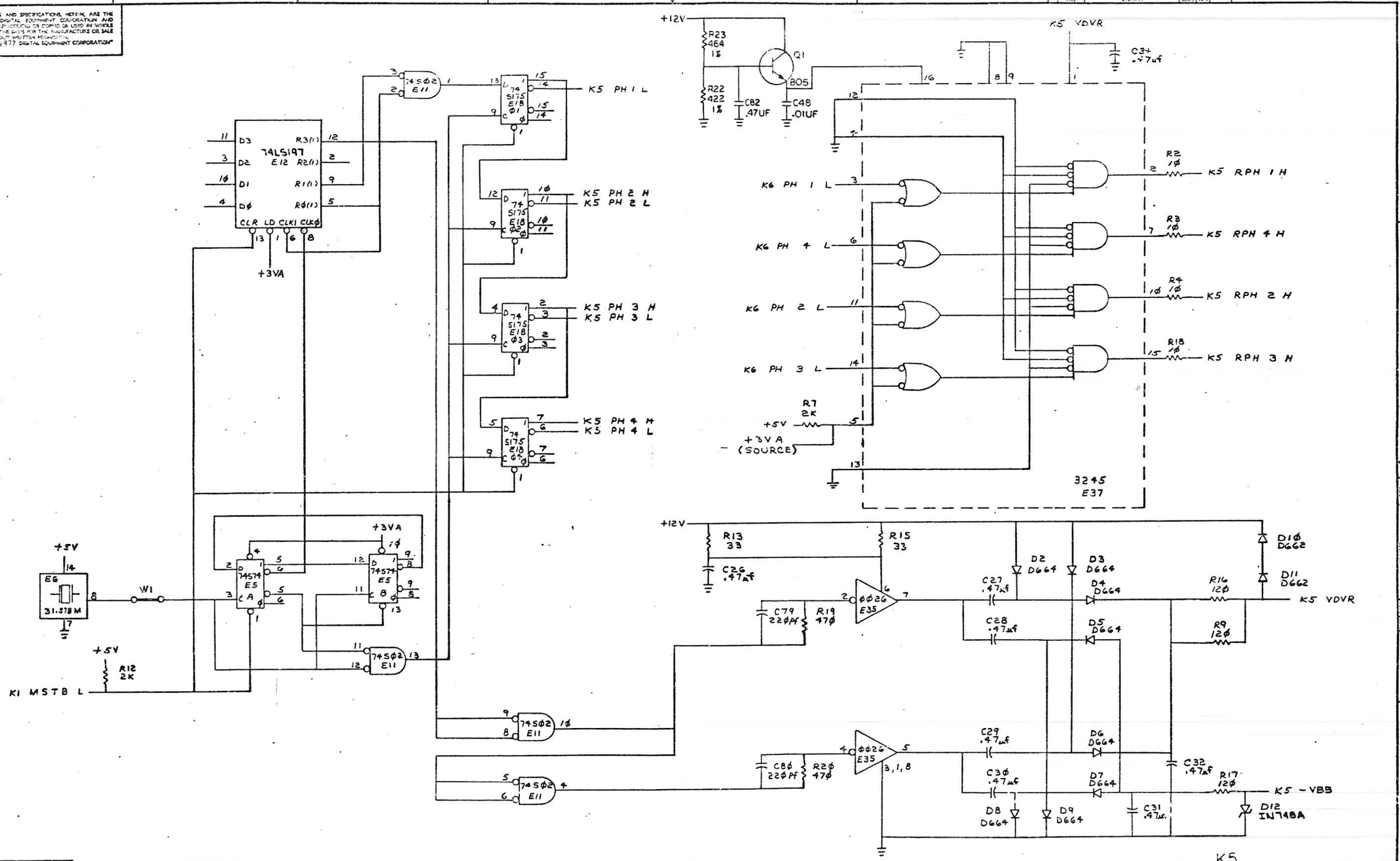

K5

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
LSI-11 CPU	D	DCS	M7270-0-1	D
SCALE ←	SHEET 2 OF 2	DIST.		

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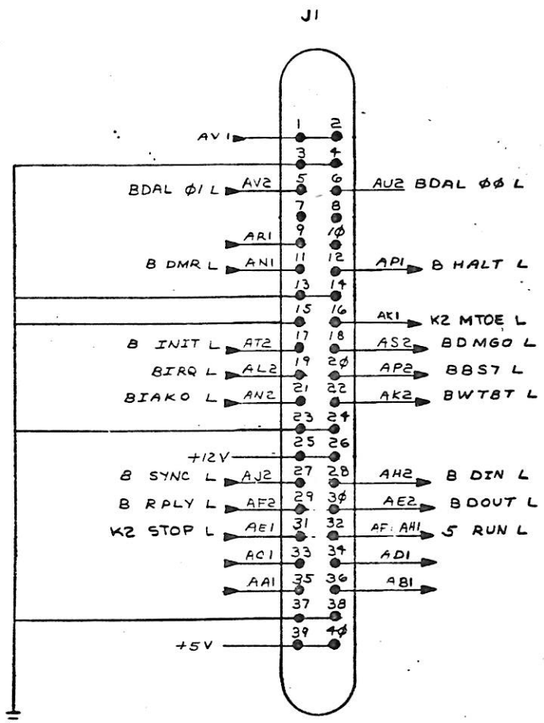
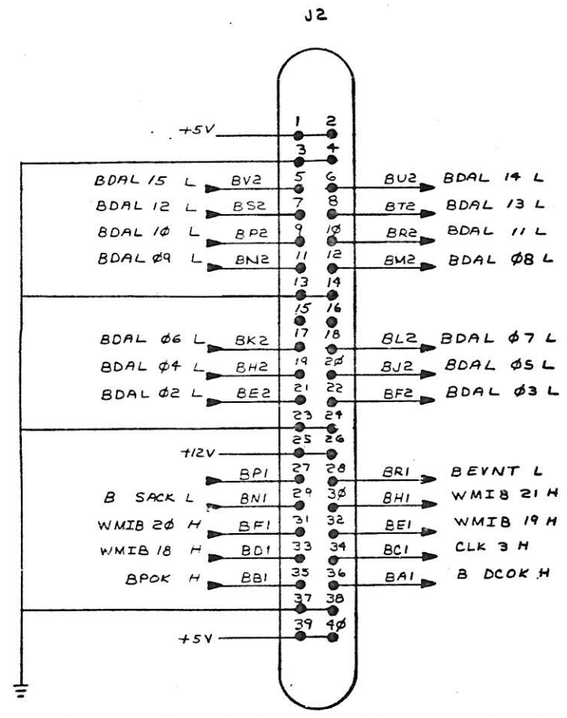

J1
AV1 1 2
3 4
BDAL Ø1 L AV2 5 6 AU2 BDAL ØØ L
7 8
AR1 9 10
B DMR L AN1 11 12 API B HALT L
13 14
15 16 AK1 K2 MTOE L
B INIT L AT2 17 18 AS2 BDMGO L
BIRQ L AL2 19 20 AP2 BBS7 L
BIAKO L AN2 21 22 AK2 BWTBT L
23 24
+12V 25 26
B SYNC L AJ2 27 28 AH2 B DIN L
B RPLY L AF2 29 30 AE2 B DOUT L
K2 STOP L AE1 31 32 AF: AH1 S RUN L
AC1 33 34 AD1
AA1 35 36 AB1
37 38
+5V 39 40


J2
+5V 1 2
3 4
BDAL 15 L BV2 5 6 BU2 BDAL 14 L
BDAL 12 L BS2 7 8 BT2 BDAL 13 L
BDAL 10 L BP2 9 10 BR2 BDAL 11 L
BDAL Ø9 L BN2 11 12 BM2 BDAL Ø8 L
13 14
15 16
BDAL Ø6 L BK2 17 18 BL2 BDAL Ø7 L
BDAL Ø4 L BH2 19 20 BJ2 BDAL Ø5 L
BDAL Ø2 L BE2 21 22 BF2 BDAL Ø3 L
23 24
+12V 25 26
BP1 27 28 BR1 BEVNT L
B SACK L BN1 29 30 BH1 WMI8 21 H
WMIB 20 H BF1 31 32 BE1 WMIB 19 H
WMIB 18 H BD1 33 34 BC1 CLK 3 H
BPOK H BB1 35 36 BA1 B DCOK H
37 38
+5V 39 40

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
LSI-11 CPU	D	DCS	M7270-0-1	D
SCALE 1	SHEET 1 OF 1	DIST.		

DEC 11000 MM 0003 1.00

DCS M7270-0-1 REV D